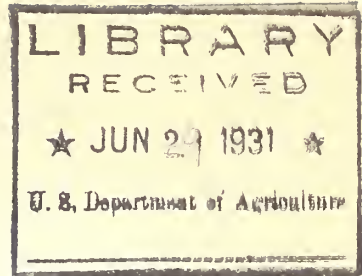


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STEM RUST AND BARBERRY NEWS

Issued by

Division of Barberry Eradication

Volume II

June 15, 1931

Number 4

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EPIDEMIOLOGY

(Reported by Miss Laura Hamilton)

Between May 26 and June 3 Mr. Ukkelberg made collections of stem rust in New Mexico and Arizona for purposes of physiologic-form identification. Upon completing the survey he stated that "no areas of heavy stem rust infection were found in either Arizona or New Mexico .. no areas which seemed to me could serve as an important source of stem rust inoculum." Collections will be identified, however, and a comparison made of the forms in this territory with those prevalent in grain-growing areas farther north.

Stem rust is moving northward. On June 4 the first stem rust of wheat was reported from Lincoln, Nebraska, by Mr. Yount; on the same date Dr. Johnston collected the first pustules of stem rust on winter wheat and oats in the uniform rust nursery at Manhattan, Kansas; and in southeastern Kansas Mr. Butler was finding traces of secondary infection (host not given). In Oklahoma, so far as reports to June 6 go, there was a trace or more of stem rust on a small percentage of the plants in some fields of wheat and oats, and no stem rust in other fields. Grain in the south-central section ranged from soft dough to ripe. Secondary infection was beginning to appear on oats in the central part of the State on June 5, while in the southernmost counties stem rust on wheat and oats was in the second or third generation as early as May 18. Further observations are being made by Mr. Butler and Mr. Ukkelberg, who are following the rust northward along parallel routes, Mr. Butler taking the eastern part of the territory.

Rust on barberries in the meantime is progressing, although not so rapidly as under more favorable conditions, since both temperature and precipitation were below normal during the month of May in most of the eradication area. Previously it was stated that "aecial infection ... had been reported by May 21 in the States east of the Mississippi, in Iowa, Missouri, and Kansas." To this list should be added South Dakota, and since that date aecia have been observed in western

Nebraska, in Minnesota, and North Dakota. Aecial infection continues heaviest in Iowa. Spread of rust from barberries to blue grass was reported in Iowa and Illinois during May, but no cases of spread to cereals have come to our attention. (June 8)

EASTERN REGION

Ohio - 8 East Broad St., Columbus - Harry Atwood

In May, 81 barberry bushes were found and destroyed on 26 properties in Champaign County. Most of these were plantings among other shrubbery on the lawns in the city of Urbana.

The field agents report that excellent cooperation is being given them in their work. The county agricultural agent in Champaign County has received several telephone calls from people in the county giving him information as to where barberry bushes may be growing.

The postmaster in Urbana has also received considerable information relative to barberry plantings. This is due to the fact that a barberry exhibit has been on display at the post office for the past 3 weeks.

Recently two of the barberry agents, while making a survey of a rural property, came upon a one-armed man cutting down a large barberry bush. He had heard that barberry agents were working in the vicinity and would visit his farm within a short time. He wanted to have the bush destroyed before the men arrived. The boys finished taking the barberry out. The farmer assured them that he would not let any sprouts or seedlings grow from this location.

On May 8, Messrs. Davis, Garwick, Horton, Snider, and Stover joined the ranks of Ohio barberry workers. Mr. Davis is a new recruit while all of the others have had from two to four years experience on barberry eradication. (June 8)

Indiana - Purdue Experiment Station Annex, West Lafayette - W. E. Leer

Since May 21, the 8 field men working in Lawrence County have salted about 1,500 escaped bushes. They have practically completed the area west of Bedford, and will begin work in the area near Heltonville about June 16.

On June 4, the men were transferred to Bartholomew County in order to work some river bottom land before the annual weeds had grown too high for effective scouting. This work will take approximately 10 days.

One of the most serious problems confronting barberry eradication at the present time is the innocent transplanting of barberry bushes from escaped areas to home sites. The following is from a news article which appeared in a Bedford, Indiana, newspaper on June 3:

"A local case of the innocent transplanting of this outlaw shrub as an ornament was reported by the agents. On the Lenas Pruett place, one mile west of Bedford on the Washington road, the owner reported 3 bushes to the agents. He stated that a former owner, Earl Anderson, had found the bushes growing wild in the woods and had transplanted them around his house as an ornament. He did not know that the bushes were barberry and that they would spread the destructive black stem rust of wheat. The bushes had rust on the leaves this season and the present owner, Mr. Pruett, was glad to have them removed."

In all of our informational work this year we plan to stress the danger of transplanting unknown shrubs to home sites. We are urging the public to be absolutely sure that shrubs which they intend to transplant are not common barberry.

In an area of escaped barberries in Allen County in 1928, there was much evidence of digging bushes, presumably for transplanting. It is almost impossible to ever trace a barberry bush dug for transplanting to a home site.

In Hamilton County this spring while inspecting an area of escaped bushes, a freshly dug hole was noted, and upon examination yellow roots were found, proving that a barberry bush had been dug and probably taken to a home site for transplanting as the top of the bush could not be found any place near the hole. This county has been intensively surveyed, and only through education and publicity can we hope to find this transplanted bush. An intensive newspaper publicity campaign is planned for Hamilton County this year, stressing this specific case in order to try to locate the bush which was dug in the area of escaped bushes this spring.

Work in areas of escaped bushes should be given major consideration if for no other reason than to prevent the innocent transplanting of bushes from these areas to home sites. (June 6)

Illinois - Post Office Building, Urbana - Robert W. Bills

Plans are being completed for the annual barberry school to be held on June 22. The field force will then be built up to full strength.

Leaf rust has been found in abundance in southern Illinois and is being found in small amounts now in the winter wheat and rye in the northern counties.

Rust on barberry bushes is unusually heavy this spring. Nearly every bush located thus far has shown moderate to heavy infection. Buckthorn is very heavily rusted in northern Illinois, other rusts have been found prevalent upon gooseberry, blackberry, wild roses, elderberry, and Mayapple. (June 9)

Michigan - Michigan State College, East Lansing - Francis B. Powers

Aecia are very prevalent this spring wherever Berberis vulgaris are located. A badly rusted hybrid resembling Berberis thunbergii, except for clustered blossoms, was found on the campus of Michigan State College at East Lansing.

Although rye and some oats are heading, the uredinial stage of stem rust has not yet been observed.

Examinations have been given and five squads of six-men each have been recommended for appointment. Six men under the direction of the assistant leader are carrying on the work in old escaped areas in Wexford County. The remainder of the men will start work July 1.

The squad in Wexford County has reported the eradication of 3,078 bushes and 4,000 seedlings to date. (June 9)

Wisconsin - State Capitol Annex, Madison - Vern O. Taylor

The field agents working in Iowa County along the Wisconsin River have reported that 2,300 barberry bushes have been destroyed since the beginning of the work on May 1. The Leader has visited the crew on three occasions and was very much impressed each time with the way this squad of laborers is working. Mr. Cate, who is in charge of the squad, states that he has never had a more efficient group of workmen.

Mr. A. J. Ullstrup, assistant leader, started active field work on June 8. He is making a trip through the southern counties of the State visiting areas of escaped bushes and looking for early evidences of rust. Two small pustules of stem rust were found on red top in Madison township, Dane County, on June 8. The grass was growing in the neighborhood of 12 to 15 feet from a bush on which pycnia were found on April 30. Leaf rust has been found at this station and by Mr. A. A. Hendrickson who started work in the Black Earth area of Dane County on June 8. Mr. Ullstrup reports the rust on barberry bushes in the southeastern part of the State as being somewhat heavier, and a sample of moderately rusted quack grass has been received. Leaf rust on winter wheat and rye may cause damage in that part of the State.

An interesting experiment was carried out by the squad working in Iowa County. The men dipped flowering branches of barberry in paraffin and they are keeping fairly well with the exception of discoloration of the leaves. We expect to repeat some of the work using thermometers and adding copper acetate to the paraffin.

Another team of six men is being added to the Wisconsin field force this summer by means of State funds and the use of two State-owned cars. This crew will do second survey work in Grant County.

There will be 12 laborers used in Wisconsin this year in the Black Earth area, and it is expected that this area will be entirely worked by the close of the season. (June 11)

WESTERN REGION

Minnesota - University Farm, St. Paul - Leonard W. Melander

Due to the closing of all the rural schools we were forced to abandon our intensive school campaign in Meeker, Waseca, and Blue Earth Counties. It will be necessary to complete these counties next fall. By that time we hope to have a more permanent Rust Busters Club arrangement figured out than we have at the present time.

The Leader spoke at two annual county weed meetings called by the Commissioner of Agriculture. In other years fifty town board members was a large attendance in Jackson and Cottonwood Counties. However, this year the attendance was 250 and 450 farmers respectively. The increase was due solely to the organization and establishment of the Redwood weed inspection plan. Mr. Rasmussen spoke at six township organization meetings in Blue Earth County. The average attendance at these meetings was 50 to 60 per township. Several new infestations of the worst noxious weeds, i.e. leafy spurge, Austrian field cress, and creeping Jenny have been found through this weed inspection system. We are positive that common barberry will be reported through the same means.

We have resumed the intensive survey of Dakota County on a small scale. On June 16 we plan to put five more men in that county. We also are eradicating scattered locations of common barberry reported by school children.

The rust on barberries has been developing rapidly within the last few days. Most of the barberries found now are moderately to heavily infected. This is due either to a heavier secondary infection or the cold weather prevented the rust from developing on the barberry after infection had taken place. The aeciospores now are being discharged in abundance. (June 6)

Iowa - Morrill Hall, Iowa State College, Ames - D. R. Shepherd

The last of the squad leaders' meetings in Iowa was held on the evening of June 5. This meeting was confined mostly to the discussion of fiscal matters and to the arranging of the personnel for the coming summer. Five squad leaders and Mr. Cassell, who is to be the assistant leader this year, were in attendance at this meeting. Twenty-four men will be employed on the barberry eradication field forces in Iowa during the coming summer. The work is of such a nature that six men will be able to work together to advantage in several areas. With this arrangement, we will have four squads of four men each and one squad of six men.

Six men have been doing survey work in Woodbury County since April 21. Thirteen plantings of bushes have been found to date. The territory along the Sioux and Missouri Rivers has been completed and a great deal of the territory surrounding Sioux City has also been surveyed. With the completion of this territory the men will make more rapid progress with the survey.

We are very well satisfied with the results of the educational project that was conducted in Linn County this spring. As a result of this work 36 properties on which bushes were growing have been reported by rural school children. Seven of the reports reveal large escaped areas that will no doubt have hundreds of bushes in them. It is our plan, at the present time, to station a squad of men at Cedar Rapids during the later part of June to clean up these areas. Mr. Fletcher has established a specimen collection area in western Linn County and during the past week has had some girls employed collecting and pressing barberry twigs for the celluloid mounts. Mr. Brown, who was in charge of the educational project in Linn County, is in charge of the collecting work.

Fifteen men will be added to the Iowa force on June 16 following the completion of the school term here at Ames. These men will be stationed in four different Iowa Counties. Through the courtesy of the Extension Service letters have been sent out by the county agents in each of these counties to the members of their particular Farm Bureaus. This letter is of such a type as to give the farm bureau members an explanation of the work that we plan to do in that county as well as giving them a brief resume of the work that has been done. We found during the field season of last year that this letter was a valuable means of introducing our work to the farm bureau members of the county and served as an introduction for the work as well as for the men.

A conference and school will be held on June 16 and the morning of June 17 previous to the time that the men leave for the field. Problems of the survey and related subjects will be discussed during this conference. Members of the College faculty and Extension Service will talk on such subjects as "Your Responsibility as Employees of the U. S.D. A.";

"Iowa's Weed Control and Plant Disease Survey Program"; "Plant Disease Control Work"; "The Identification of Common Grains and Grasses"; and "Weed Identification." A field trip will also be held during this conference in order to explain methods of survey to the men and also to give them a chance to see barberries growing in a natural state.
(June 6)

District No. 1 - State College Station, Fargo, N. Dak. - G. C. Mayoue

Montana and North Dakota. Work in the District during the past half month has varied from the maze of routine office preparations for the coming summer survey to scattered field activities in educational and survey lines.

Resurvey in the Montana counties of Dawson, Richland, and Sheridan has been conducted by assistant leader Ivar Twilde and Gibson Zeidler, who just recently completed educational work in the last named county. In North Dakota, field work has also swung from the educational to survey with three agents carrying on an intensive resurvey in Stutsman County. Conditions for spring field work have been quite ideal, with practically no time being lost because of inclement weather.

Following up the work of Rust Busters in Glendive, Montana and Walcott, North Dakota, news stories were sent to papers in all counties having Rust Buster Clubs. It was the pleasure of Clarence Lockrem, agent who had organized the club in the Walcott school, to return within three weeks and present N. R. B. C. medal badges to two of the school children.

Rust Buster activity throughout the State is picking up rapidly. During the month of May three reports from school children accounted for 23 bushes and many seedlings. Though such numbers may seem small as compared to finds in the more thickly settled eastern States, such reports are of no small importance in cleaning up the scattered areas from which they come. Evidence that Rust Buster interest is being kept alive throughout North Dakota is found in the inquiries which come from parts of the State where clubs have not yet been organized. Field agents report having seen many children wearing Rust Buster buttons in Barnes County, where the organization work was carried on more than a year ago.
(June 6)

District No. 3 - Agricultural College, Fort Collins, Colo. - E. A. Lungren

Colorado. Field work started June 1 in Colorado. Second survey started in Fremont and Pueblo Counties, the men arrived at their stations on the first day of June and commenced work. Circular letters from the county agents in each county regarding the survey are being mailed to

all farmers along with the extension circular "Bust the Rust."

On May 23 a general conference of the Colorado and Wyoming field men and cooperators was held at the Colorado Agricultural College. Representatives from the Extension Service and Experiment Station gave talks to the men regarding barberry eradication work, their conduct in the field, and what the college and department expected of them. Following the morning meeting a field trip was conducted in Larimer County, Colorado. Several different types of territory were gone over in order to review the various scouting methods used in the field. In one large escaped area along the Big Thompson River near Loveland, many small barberries and seedlings were found.

Wyoming. Field work started in Wyoming June 1. The county agents in Wyoming will send circular letters to the farmers in the counties where work will be done this season. Similar arrangements to those in Colorado have been worked out for Wyoming.

Western Nebraska. Second survey has been going on in western Nebraska since May 20. Box Butte County is being surveyed by Messrs. Farnham and Frink. One property of three bushes was found near Hemingford. The bushes were infected although no spread had resulted. On our second survey of Box Butte County which started the latter part of last year, 5 properties of 14 bushes have been eradicated. In such an extensive grain area, these bushes evidently were responsible for rust epidemics which have existed there in the past. (June 3)

PERSONNEL

Mr. W. L. Popham, Dr. Ralph U. Cotter, and Mr. Donald G. Fletcher were in Washington June 9 attending the quarantine hearing.